

## **PART – 2**

### **CHAPTER 05**

### **ACCOUNTING RATIOS**

#### **Question 1**

**What do you mean by Ratio Analysis?**

#### **Answer:**

The process of comparing the financial statements of the companies by making the calculation of the percentages in order to determine the performance of the company in the terms of growth, profitability etc. The ratio analysis can thus be used by the management of the organization in order to determine the soundness of the business in the financial terms.

#### **Questions:2**

**What are the various types of ratios?**

#### **Answer:**

**Following are the main types of ratios:**

1. Profitability ratios – The ratios which are used to calculate the overall efficiency of the concerned business is known as profitability ratios.
2. Coverage ratios – The convergence ratio helps in the indication of whether the investors will get the guaranteed returns from their investments made.
3. Turnover ratios – The turnover ratios helps in the indication of the efficiency of the usage of the assets of the business.



4. Financial ratios – The financial ratios helps in the indication of the financial position of the business from the point of view of both the long term and the short term solvency of the business.

5. Control ratios – The usage of these ratios is done in order to find out whether there is the deviation in the actual performance of the business from its budgeted performance.

### Questions:3

**What relationships will be established to study:**

- a. Inventory Turnover**
- b. Trade Receivables Turnover**
- c. Trade Payables Turnover**
- d. Working Capital Turnover**

**Answer:** The following are the various five main types of ratios:

a. Inventory turnover – This ratio is used in order to determine the efficiency of the organization in maintaining its inventory. It is given by the formula

$$\left( \frac{\text{cost of goods sold} + \text{operating expenses}}{\text{net sales}} \right) \times 100 \quad \frac{\text{cost of good sold}}{\text{average inventory cost}}$$

b. Trade receivable turnover – These ratios are useful in indicating the number of times in which the collection of the amount of the debtors is made by the organization

$$\frac{\text{Net credit sales}}{\text{average debtors}}$$

c. Trade payables turnover – This ratio is helpful in indicating the period of the credit which is available to any firm to repay its creditors. It thus compares the creditors



with the total number of the credit purchases made by any firm. It is given by the formula  $\frac{\text{Credit purchases}}{\text{average creditors}}$

d. Working capital turnover – This ratio is useful for the determination of the efficiency of any firm in the utilization of its net working capital. It thus indicates the total number of the time the working capital is turned into sales. It can be calculated by the formula  $\frac{\text{cost of sales}}{\text{net working capital}}$

### Question 4

**The liquidity of a business firm is measured by its ability to satisfy its long-term obligations as they become due. What are the ratios used for this purpose?**

**Answer:** The following given ratios are used to determine the liquidity of the organization in order to meet its long-term obligations

- Debt equity ratio – This ratio is used to measure the financial soundness of any business by measuring the relationship between the external and the internal equities of the organization. The formula to calculate debt equity ratio is  $= \frac{\text{external equities}}{\text{shareholders' funds}}$
- Proprietary ratio – This ratio is helpful in the indication of the relationship between the funds of the shareholders with the total assets of any company. This ratio is thus helpful in the determination of the long term solvency of the business. The formula to calculate proprietary ratio is  $= \frac{\text{shareholders' funds}}{\text{total assets}}$



- Fixed assets to proprietors fund ratio – This ratio is helpful in the indication of the percentage of funds invested of the owner to bring in the fixed assets to the firm. The formula to calculate fixed assets to proprietary ratio is  $= \frac{\text{fixed assets}}{\text{proprietors funds}}$
- Interest coverage ratio – This ratio helps in the indication of the firm's profits being enough to meet the obligations of the interest on the long term loans of the business. The formula to calculate interest coverage ratio is  $= \frac{\text{net profit before interest and tax}}{\text{interest on long term loans}}$

### Question 5

**The average age of inventory is viewed as the average length of time inventory is held by the firm or as the average number of day's sales in inventory. Why?**

**Answer:** The inventory turnover ratio is determined in order to determine the efficiency of the organization in the management of its inventory. This ratio is helpful in making the assessment of the number of the times the stock is converted into sales. The formula to calculate the ratio is = cost of goods sold / average inventory at cost

Where, cost of goods sold = opening stock + purchases + direct expenses – closing stock (or) net sales – gross profit

Average inventory =  $\frac{\text{opening stock} + \text{closing stock}}{2}$

### Question 6

**What are liquidity ratios? Discuss the importance of current and liquid ratio.**



**Answer:** The liquidity ratio is calculated to determine the position of the short term solvency of nay business.

Following is the importance of the calculation of the current and the liquid ratio:

- **Current ratio** – The calculation of this ratio is made in order to determine the relationship between the current assets and the current liabilities of the business. The ratio of 2:1 is considered to be the favorable ratio where the current assets are divided with the current liabilities. It is helpful in determining whether any business will be able to repay its current liabilities with its current assets. The formula for the calculation of the same is

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

- **Liquid / quick ratio** – The calculation of the liquid or the quick ratio is made in order yto determine and analyze the quickness with which the assets of the organization can be converted into the cash. The company which has this ratio as 1:1 is considered to be in the favorable position. The main objective of this ratio is to determine whether the concerned company can meet the emergency situation by converting its asset into cash in the short span of time. The formula for calculating this ratio is:

$$\text{Quick ratio} = \frac{\text{quick assets}}{\text{current liabilities}}$$

Where, quick assets = current assets – stock + prepaid expenses



## Question 7

### How would you study the solvency position of the firm?

**Answer:** The solvency ratios are the measure with which the solvency position of the business can be determined. The solvency position helps the organization to determine whether the business will be able to survive in the long run. Following are the solvency ratios which can determine the solvency position of the business:

- Debt equity ratio – This ratio is used to determine the relationship between the external and the internal equity of the organization and assess the soundness of the business to determine its long term financial position. The formula for the calculation of the same is:

$$\text{Debt equity ratio} = \frac{\text{external equities}}{\text{shareholders' funds}}$$

- Proprietary ratio – This ratio is helpful in the indication of the relationship between the funds of the shareholders and the total assets of the organization to determine the long term financial position of the business. The formula for the calculation of this ratio is

$$\text{Proprietary ratio} = \frac{\text{shareholders' funds}}{\text{total assets}}$$

- Fixed assets to proprietors fund ratio – This ratio is helpful in the indication of the fund of the owner which is invested to get the fixed asset in the firm. The calculation of this can be done through this formula:

$$\text{Fixed assets to proprietary ratio} = \frac{\text{fixed assets}}{\text{proprietors funds}}$$

- Interest coverage ratio – This ratio is useful in the indication of whether the profits made by the firm are



able enough to meet the obligations of the interest and the loans of the firm. The formula for the calculation of the same is:

$$\text{Interest coverage ratio} = \frac{\text{net profit before interest and tax}}{\text{interest on long term loans}}$$

## Question 8

**What are important profitability ratios? How are these worked out?**

**Answer:** The profitability ratios are way to measure the effectiveness of the performance of the business in an overall manner. The profitability ratios are given below:

- Gross profit ratio – This ratio is used to determine the relation between the gross profit incurred by the organization in relation to the sales it has made. It is given by this formula:

$$\text{Gross profit ratio} = \left( \frac{\text{gross profit}}{\text{net sales}} \right) \times 100$$

Where

Gross profit = Net sales – cost of goods sold

Net sales = Sales – sales return

Cost of goods sold = opening stock + purchases + direct expenses – closing stock (or) net sales – gross profit

- Net profit ratio – This ratio is used in the determination of the relationship between the net profits made by the company in relation to the net sales it has made in the





particular accounting year. It is given by the following formula:

$$\text{Net profit ratio} = \left( \frac{\text{net profit}}{\text{net sales}} \right) \times 100$$

Where

$$\text{Net sales} = \text{Sales} - \text{sales return}$$

- Operating profit ratio – This ratio is used in the determination of the relationship between the operating profit made by any company with relation to its nets sales made in an accounting year. It is given by the following formula:

$$\text{Operating profit ratio} = \left( \frac{\text{operating profit}}{\text{net sales}} \right) \times 100$$

Where

$$\text{Operating profit} = \text{net profit} + \text{non – operating expenses} - \text{non – operating incomes}$$

$$\text{Net sales} = \text{Sales} - \text{sales return}$$

- Operating ratio – This ratio is used for the determination of the relationship which is between the cost of operations and the net sales in the percentage form. The operating costs is calculated by giving and addition of operating expenses to the cost of the goods sold. These operating profits includes of all the administrative and the office expenses. The formula to calculate the ratio is:

$$\text{Operating ratio} = \left( \frac{\text{cost of goods sold} + \text{operating expenses}}{\text{net sales}} \right) \times 100$$

Where

$$\text{Net sales} = \text{Sales} - \text{sales return}$$





## Question 9

**The current ratio provides a better measure of overall liquidity only when a firm's inventory cannot easily be converted into cash. If inventory is liquid, the quick ratio is a preferred measure of overall liquidity. Explain.**

### Answer:

The current ratio is helpful in the indication of the relationship between the current assets and the liabilities of the organization when the favourable ratio of it is considered to be 2:1. This hence implies that the organization is in favourable position in the business because it has its current assets two times than the current liabilities and hence the current liabilities can be easily met by spending the current assets of the organization at any given time.

The liquid or the quick ratio on the other hand is used to determine whether the current liabilities of the company can be quickly met by the organization when the quick assets of the company can be converted into cash immediately. The sound quick ratio is considered to be 1:1 where it is considered that the liquid assets of the company must be equal to meet the current liabilities of the company at any given immediate situation in the company for an accounting period.

The current ratio is generally preferred in the situations in which the type of the business has the inventories or the stock which can be easily converted into cash because assets like Machinery, Plant etc. cannot be sold off immediately. However in the cases when there is no maintenance of stock such as in the case of the service sector companies where no



stock is kept at all, the liquidity ratio is preferable because they immediately generate liquid assets as and when they make a sale. Further, the companies may prefer the liquid/quick ratio in the cases when the process of the stock which are held by it is likely to fluctuate, causing the fluctuation in the liquidity position of the business.

### Questions 10

Following is the Balance Sheet of Raj Oil Mills Limited as at March 31, 2016

Particulars	Rs.
<b>I. Equity and Liabilities:</b>	
1. Shareholders' funds	
a) Share capital	7,90,000
b) Reserves and surplus	35,000
2. Current Liabilities	
a) Trade Payables	72,000
<b>Total</b>	<b>8,97,000</b>
<b>II. Assets</b>	
1. Non-current Assets	
a) Fixed assets	
Tangible assets	7,53,000
2. Current Assets	
a) Inventories	55,800
b) Trade Receivables	28,800
c) Cash and cash equivalents	59,400
<b>Total</b>	<b>8,97,000</b>



## Calculate Current Ratio.

**Answer:**

**Current Ratio** = Current Assets/Current Liabilities=  
144000/72000= **2:1**

Current Assets = Inventories + Trade Receivables + Cash=  
55800 + 28800 + 59400= Rs.144000

Current Liabilities = Trade Payables= Rs.72000

### Question 11

Following is the Balance Sheet of Title Machine Ltd. as at March 31, 2017.

Particulars	Amount Rs.
<b>I. Equity and Liabilities</b>	
<b>1. Shareholders' funds</b>	
a) Share capital	24,00,000
b) Reserves and surplus	6,00,000
<b>2. Non-current liabilities</b>	
a) Long-term borrowings	9,00,000
<b>3. Current liabilities</b>	
a) Short-term borrowings	6,00,000
b) Trade payables	23,40,000
c) Short-term provisions	60,000
<b>Total</b>	<b>69,00,000</b>
<b>II. Assets</b>	
<b>1. Non-current Assets</b>	
a) Fixed assets	
Tangible assets	45,00,000
<b>2. Current Assets</b>	

a) Inventories	12,00,000
b) Trade receivables	9,00,000
c) Cash and cash equivalents	2,28,000
d) Short-term loans and advances	72,000
<b>Total</b>	<b>69,00,000</b>

**Calculate Current Ratio and Liquid Ratio.**

**Answer:**

**1. Current Ratio** = Current Assets/Current Liabilities=  
 $2400000/3000000 = 0.8:1$

Current Assets = Inventories + Trade Receivables + Cash +  
 Short Term Loans and Advances =  $1200000 + 900000 + 228000 + 72000 = \text{Rs.}2400000$

Current Liabilities = Trade Payables + Short Term  
 Borrowings + Short Term Provisions =  $2340000 + 600000 + 60000 = \text{Rs.}3000000$

**2. Liquid Ratio** = Liquid Assets/Current Liabilities=  
 $1200000/3000000 = 0.4:1$

Liquid Assets = Trade Receivables + Cash + Short Term  
 Loans and Advances =  $900000 + 228000 + 72000 = \text{Rs.}1200000$

### Question 12

**Current Ratio is 3.5:1. Working Capital is Rs 90,000. Calculate the amount of Current Assets and Current Liabilities.**

**Answer:**

Current Ratio = Current Assets/Current Liabilities

3.5/1 = Current Assets/Current Liabilities

Current Assets = 3.5 Current Liabilities (1)

Working Capital = Current Assets – Current Liabilities

90000 = Current Assets – Current Liabilities

90000 = 3.5 Current Liabilities – Current Liabilities (from 1)

2.5 Current Liabilities = 90000

**Current Liabilities = 90000/2.5= 36000**

**Current Assets = 3.5 Current Liabilities= 3.5 x 36000= 126000**

### Question 13

**Shine Limited has a current ratio 4.5:1 and quick ratio 3:1; if the inventory is 36,000, calculate current liabilities and current assets.**

**Answer:**

Current Ratio = Current Assets/Current Liabilities

4.5/1 = Current Assets/Current Liabilities

Current Assets = 4.5 Current Liabilities (1)

Quick Ratio = Quick Assets/Current Liabilities

3/1 = Quick Assets/Current Liabilities



Quick Assets = 3 Current Liabilities (2)

Quick Assets = Current Assets – Inventories = Current Assets – 36000

Current Assets – Quick Assets = 36000

4.5 Current Liabilities – 3 Current Liabilities = 36000 (from 1 & 2)

1.5 Current Liabilities = 36000

**Current Liabilities = 36000/1.5 = 24000**

**Current Assets = 4.5 Current Liabilities = 4.5 x 24000 = 108000**

### Question 14

**Current liabilities of a company are Rs 75,000. If current ratio is 4:1 and liquid ratio is 1:1, calculate value of current assets, liquid assets and inventory.**

**Answer:**

Current Ratio = Current Assets/Current Liabilities

4 = Current Assets/75000

**Current Assets = 75000 x 4 = 300000**

Liquid Ratio = Liquid Assets/Current Liabilities

1 = Liquid Assets/75000

**Liquid Assets = 75000**

**Inventory = Current Assets – Liquid Assets = 300000 – 75000 = 225000**

### Question 15

**Handa Ltd. has inventory of Rs 20,000. Total liquid assets are Rs 1,00,000 and quick ratio is 2:1. Calculate current ratio.**



**Answer:**

Quick Ratio = Quick Assets/Current Liabilities

$2/1 = 100000/\text{Current Liabilities}$

Current Liabilities =  $100000/2 = 50000$

Current Assets = Quick Assets + Inventory =  $100000 + 20000 = 120000$

**Current Ratio** = Current Assets/Current Liabilities =  $120000/50000 = 2.4:1$

### Question 16

**Calculate debt equity ratio from the following information:**

	Rs
<b>Total Assets</b>	<b>15,00,000</b>
<b>Current Liabilities</b>	<b>6,00,000</b>
<b>Total Debts</b>	<b>12,00,000</b>

**Answer:**

**Debt-equity Ratio** = Long Term Debt/Equity =  $600000/300000 = 2:1$

Long Term Debt = Total Debt – Current Liabilities =  $1200000 - 600000 = 600000$

Equity = Total Assets – Total Debt =  $1500000 - 1200000 = 300000$





### Question 17

**Calculate Current Ratio if:**

**Inventory is Rs 6,00,000; Liquid Assets Rs 24,00,000;  
Quick Ratio 2:1.**

**Answer:**

Quick Assets = Quick Assets/Current Liabilities

$2/1 = 2400000/\text{Current Liabilities}$

$\text{Current Liabilities} = 2400000/2 = 1200000$

$\text{Current Assets} = \text{Liquid Assets} + \text{Inventory} = 2400000 + 600000 = 3000000$

**Current Ratio** =  $\text{Current Assets}/\text{Current Liabilities} = 3000000/1200000 = 2.5:1$

### Question 18

**Compute Stock Turnover Ratio from the following information:**

	Rs
<b>Net Revenue from Operations</b>	<b>2,00,000</b>
<b>Gross Profit</b>	<b>50,000</b>
<b>Inventory at the end</b>	<b>60,000</b>
<b>Excess of inventory at the end over inventory in the beginning</b>	<b>20,000</b>

**Answer:**

**Inventory Turnover Ratio** = Cost of Goods Sold/Average Inventory =  $150000/50000 = 3$  times

Cost of Goods Sold = Net Sales – Gross Profit =  $200000 - 50000 = 150000$

Inventory in the beginning = Inventory at the end – Excess of Inventory at the end over Inventory in the beginning =  $60000 - 20000 = 40000$

Average Inventory = (Inventory in the beginning + Inventory at the end)/2 =  $(40000 + 60000)/2 = 100000/2 = 50000$

### Question 19

**Calculate following ratios from the following information:**

**(i) Current ratio (ii) Acid test ratio (iii) Operating Ratio (iv) Gross Profit Ratio**

	Rs
<b>Current Assets</b>	<b>35,000</b>
<b>Current Liabilities</b>	<b>17,500</b>
<b>Inventory</b>	<b>15,000</b>
<b>Operating Expenses</b>	<b>20,000</b>
<b>Revenue from Operations</b>	<b>60,000</b>
<b>Cost of Goods Sold</b>	<b>30,000</b>



### Answer:

(i) **Current Ratio** = Current Assets/Current Liabilities =  
 $35000/17500 = 2:1$

(ii) **Liquid Ratio** = Liquid Assets/Current Liabilities =  
 $20000/17500 = 1.143:1$

Liquid Assets = Current Assets – Inventory =  $35000 - 15000 = 20000$

(iii) **Operating Ratio** = {(Cost of Goods Sold + Operating Expenses)/Net Revenue from Operations} x 100 = {(30000 + 20000)/60000} x 100 = {50000/60000} x 100 = **83.33%**

(iv) **Gross Profit Ratio** = (Gross Profit/Net Revenue from Operations) x 100 =  $(30000/60000) \times 100 = 50\%$

Gross Profit = Net Revenue from Operations – Cost of Goods Sold =  $60000 - 30000 = 30000$

### Question 20

From the following information calculate:

(i) Gross Profit Ratio (ii) Inventory Turnover Ratio (iii) Current Ratio (iv) Liquid Ratio (v) Net Profit Ratio (vi) Working capital Ratio:

	Rs
Revenue from Operations	25,20,000
Net Profit	3,60,000
Cost of Revenue from Operations	19,20,000
Long-term Debts	9,00,000
Trade Payables	2,00,000



<b>Average Inventory</b>	<b>8,00,000</b>
<b>Current Assets</b>	<b>7,60,000</b>
<b>Fixed Assets</b>	<b>14,40,000</b>
<b>Current Liabilities</b>	<b>6,00,000</b>
<b>Net Profit before Interest and Tax</b>	<b>8,00,000</b>

**Answer:**

(i) **Gross Profit Ratio** = (Gross Profit/Net Revenue from Operations) x 100 = (600000/2520000) x 100 = **23.81%**  
 Gross Profit = Net Revenue from Operations – Cost of Revenue from Operations = 2520000 – 1920000 = 600000

(ii) **Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory = 1920000/800000 = **2.4 times**

(iii) **Current Ratio** = Current Assets/Current Liabilities = 1560000/600000 = **2.6:1**  
 Current Assets = Liquid Assets + Inventory = 760000 + 800000 = 1560000

(iv) **Liquid Ratio** = Liquid Assets/Current Liabilities = 760000/600000 = **1.27:1**

Note: The figure of Rs.760000 is taken as Liquid Assets and not the Current Assets.

(v) **Net Profit Ratio** = (Net Profit/Net Revenue from Operations) x 100 = (360000/2520000) x 100 = **14.28%**

(vi) **Working Capital Ratio** = Revenue from Operations/Working Capital =  $2520000/960000 = 2.625$  times

Working Capital = Current Assets – Current Liabilities =  $1560000 - 600000 = 960000$

### Question 21

Compute Gross Profit Ratio, Working Capital Turnover Ratio, Debt Equity Ratio and Proprietary Ratio from the following information:

	Rs
<b>Paid-up Share Capital</b>	<b>5,00,000</b>
<b>Current Assets</b>	<b>4,00,000</b>
<b>Revenue from Operations</b>	<b>10,00,000</b>
<b>13% Debentures</b>	<b>2,00,000</b>
<b>Current Liabilities</b>	<b>2,80,000</b>
<b>Cost of Revenue from Operations</b>	<b>6,00,000</b>

### Answer:

1. **Gross Profit Ratio** = (Gross Profit/Net Revenue from Operations) x 100 =  $(400000/1000000) \times 100 = 40\%$

Gross Profit = Net Revenue from Operations – Cost of Revenue from Operations =  $1000000 - 600000 = 400000$

2. **Working Capital Turnover Ratio** = Revenue from Operations/Working Capital =  $1000000/120000 = 8.33$  times

Working Capital = Current Assets – Current Liabilities =  
400000 – 280000 = 120000

3. **Debt Equity Ratio** = Debt/Equity = 200000/500000 = 2:5  
= **0.4:1**

4. **Proprietary Ratio** = Shareholder Funds/Total Assets =  
500000/980000 = **0.51:1**

Total Assets = Paid-up Capital + Debentures + Current  
Liabilities (Since, Total Liabilities = Total Assets) = 500000  
+ 200000 + 280000 = 980000

## Question 22

**Calculate Inventory Turnover Ratio if:**

**Inventory in the beginning is Rs 76,250, Inventory at the end is 98,500, Gross Revenue from Operations is Rs 5,20,000, Return Inwards is Rs 20,000, Purchases is Rs 3,22,250.**

**Answer:**

**Inventory Turnover Ratio** = Cost of Revenue from  
Operations/Average Inventory = 300000/87375 = **3.43 times**

Cost of Revenue from Operations = Inventory in the  
beginning + Purchase – Inventory at the end = 76250 +  
322250 – 98500 = 300000

Average Inventory = (Inventory in the beginning +  
Inventory at the end)/2 = (76250 + 98500)/2 = 174750/2 =  
87375

### Question 23

Calculate Inventory Turnover Ratio from the data given below:

	Rs
Inventory at the beginning of the year	10,000
Stock* at the end of the year	5,000
Carriage	2,500
Revenue from Operations	50,000
Purchases	25,000

\*Since the very first item is Inventory in the beginning, so this item should be Inventory at the end.

**Answer:**

**Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory =  $32500/7500 = 4.33$  times

Cost of Revenue from Operations = Inventory in the beginning + Purchase + Carriage – Inventory at the end =  $10000 + 25000 + 2500 - 5000 = 32500$

Average Inventory = (Inventory in the beginning + Inventory at the end)/2 =  $(10000 + 5000)/2 = 15000/2 = 7500$

### Question 24

A trading firm's average inventory is Rs 20,000 (cost). If the inventory turnover ratio is 8 times and the firm sells





goods at a profit of 20% on sale, ascertain the profit of the firm.

**Answer:**

Inventory Turnover Ratio = Cost of Revenue from Operations/Average Inventory

8 = Cost of Revenue from Operations/20000

Cost of Revenue from Operations = 20000 x 8 = 160000

Let Sale Price be Rs.100

Then, Profit is Rs.20

Hence, the Cost of Revenue from Operations = 100 – 20 = Rs.80

If the Cost of Revenue from Operations is Rs.80, then Revenue from Operations = 100

If the Cost of Revenue from Operations is Re.1, then Revenue from Operations = 100/80

If the Cost of Revenue from Operations is Rs.160000, then Revenue from Operations = 100/80 x 160000 = 200000

**Profit** = Net Revenue from Operations – Cost of Revenue from Operations = 200000 – 160000 = **40000**

### Question 25

You are able to collect the following information about a company for two years:

	2015-16	2016-17
<b>Book Debts on Apr. 01</b>	<b>Rs 4,00,000</b>	<b>Rs 5,00,000</b>



<b>Book Debts on Mar. 31</b>		<b>Rs 5,60,000</b>
<b>Stock in trade on Mar. 31</b>	<b>Rs 6,00,000</b>	<b>Rs 9,00,000</b>
<b>Revenue from Operations (at gross profit of 25%)</b>	<b>Rs 3,00,000</b>	<b>Rs 24,00,000</b>

**Calculate Inventory Turnover Ratio and Trade Receivables Turnover Ratio if in the year 2015-16 stock in trade increased by Rs 2,00,000.**

**Answer:**

**Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory =  $1800000/750000 = 2.4$  times

Cost of Revenue from Operations = Revenue from Operations – Gross Profit =  $2400000 - 600000 = 1800000$

Average Inventory = (Inventory in the beginning + Inventory at the end)/2 =  $(600000 + 900000)/2 = 1500000/2 = 750000$

**Trade Receivables Turnover Ratio** = Net Credit Sales/Average Trade Receivables =  $2400000/530000 = 4.53$  times

Average Trade Receivables = (Trade Receivables in the beginning + Trade Receivables at the end)/2 = (500000 + 560000)/2 = 530000

**Note:** It has been assumed that all sales are credit sales.

### Question 26

The following Balance Sheet and other information, calculate following ratios:

- (i) Debt-Equity Ratio (ii) Working Capital Turnover Ratio (iii) Trade Receivables Turnover Ratio

#### Balance Sheet as at March 31, 2017

Particulars	Note No.	Rs.
<b>I. Equity and Liabilities:</b>		
1. Shareholders' funds		
a) Share capital		10,00,000
b) Reserves and surplus		9,00,000
2. Non-current Liabilities		
a) Long-term borrowings		12,00,000
3. Current Liabilities		
a) Trade payables		5,00,000
<b>Total</b>		<b>36,00,000</b>
<b>II. Assets</b>		
1. Non-current Assets		
a) Fixed assets		
Tangible assets		18,00,000
2. Current Assets		
a) Inventories		4,00,000

<b>b) Trade Receivables</b>		<b>9,00,000</b>
<b>c) Cash and cash equivalents</b>		<b>5,00,000</b>
<b>Total</b>		<b>36,00,000</b>

**Additional Information: Revenue from Operations Rs. 18,00,000 Calculate:**

**i) Debt-Equity Ratio**

**ii) Working Capital Turnover Ratio**

**iii) Trade Receivables Turnover Ratio**

**(Debt-Equity Ratio 0.63:1; Working Capital Turnover Ratio 1.39 times; Trade Receivables Turnover Ratio 2 times)**

**Answer:**

**(i) Debt-equity Ratio** = Debt/Equity =  $1200000/1900000 = 0.63:1$

Debt = Long Term Borrowings = Rs.1200000

Equity = Share Capital + Reserve and Surplus =  $1000000 + 900000 = 1900000$

**(ii) Working Capital Turnover Ratio** = Revenue from Operations/Working Capital =  $1800000/1300000 = 1.39$  times

Working Capital = Current Assets – Current Liabilities =  $18000000 - 500000 = 1300000$

**(iii) Trade Receivables Turnover Ratio** = Net Credit Sales/Average Trade Receivables =  $1800000/900000 = 2$  times

Net Credit Sales = Revenue from Operations = 1800000

Average Trade Receivables = Trade Receivables = 900000

### Question 27

From the following information, calculate the following ratios:

i) Quick Ratio

ii) Inventory Turnover Ratio

iii) Return on Investment

	Rs.
Inventory in the beginning	50,000
Inventory at the end	60,000
Revenue from operations	4,00,000
Gross Profit	1,94,000
Cash and Cash Equivalents	40,000
Trade Receivables	1,00,000
Trade Payables	1,90,000
Other Current Liabilities	70,000
Share Capital	2,00,000
Reserves and Surplus	1,40,000

(Balance in the Statement of Profit & Loss A/c)

**Answer:**

(i) **Liquid Ratio** = Liquid Assets/Current Liabilities =  
 $140000/260000 = 7:13 = \mathbf{0.54:1}$

Liquid Assets = Cash + Debtors =  $40000 + 100000 =$   
140000

Current Liabilities = Creditors + Outstanding Expenses =  
 $190000 + 70000 = 260000$

(ii) **Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory =  $206000/55000 = 3.74$  times  
 Cost of Revenue from Operations = Revenue from Operations – Gross Profit =  $400000 - 194000 = 206000$   
 Average Inventory = (Inventory in the beginning + Inventory at the end)/2 =  $(50000 + 60000)/2 = 110000/2 = 55000$

(iii) **Return on Investment** = (Profit before Interest and Tax/Capital Employed) x 100 =  $(140000/340000) \times 100 = 41.17\%$

Capital Employed = Equity Share Capital + Profit and Loss =  $200000 + 140000 = 340000$

### Question 28

From the following, calculate (a) Debt Equity Ratio (b) Total Assets to Debt Ratio (c) Proprietary Ratio.

	Rs
Equity Share Capital	75,000
Preference Share Capital	25,000
General Reserve	45,000
Accumulated Profits	30,000
Debentures	75,000
Sundry Creditors	40,000
Outstanding Expenses	10,000



**Answer:**

(a) **Debt-equity Ratio** = Debt/Equity =  $75000/175000 = 0.43:1$

Debt = Debenture = 75000

Equity/Shareholders Fund = Equity Share Capital + Preference Share Capital + General Reserve + Accumulated Profits =  $75000 + 25000 + 45000 + 30000 = 175000$

(b) **Total Assets to Debt Ratio** = Total Assets/Debt =  $300000/75000 = 4:1$

Total Assets = Equity Share Capital + Preference Share Capital + General Reserve + Accumulated Profits + Debentures + Sundry Creditors + Outstanding Expenses (Since Total Liabilities is equal to Total Assets) =  $75000 + 25000 + 45000 + 30000 + 75000 + 40000 + 10000 = 300000$

(c) **Proprietary Ratio** = Shareholders Fund/Net Assets =  $175000/300000 = 0.58:1$

### Question 29

**Cost of Revenue from Operations is Rs 1,50,000.**

**Operating expenses are Rs 60,000. Revenue from Operations is Rs 2,50,000. Calculate Operating Ratio.**

**Answer:**

**Operating Ratio** =  $\{(\text{Cost of Revenue from Operations} + \text{Operating Expenses})/\text{Net Revenue from Operations}\} \times 100$   
 $= \{(150000 + 60000)/250000\} \times 100 = \{210000/250000\} \times 100 = 84\%$





### Question 30

The following is the summarised transactions and Statement of Profit and Loss Account for the year ending March 31, 2007 and the Balance Sheet as on the basis of following information, calculate:

(i) Gross Profit Ratio (ii) Current Ratio (iii) Acid Test Ratio (iv) Inventory Turnover Ratio (v) Fixed Assets Turnover Ratio

	Rs.
Gross Profit	50,000
Revenue from Operations	1,00,000
Inventory	15,000
Trade Receivables	27,500
Cash and Cash Equivalents	17,500
Current Liabilities	40,000
Land & Building	50,000
Plant & Machinery	30,000
Furniture	20,000

**Answer:**

(i) **Gross Profit Ratio** = (Gross Profit/Revenue from Operations) x 100 = (50000/100000) x 100 = **50%**

(ii) **Current Ratio** = Current Assets/Current Liabilities = 60000/40000 = **1.5:1**

Current Assets = Inventory + Trade Receivables + Cash and Cash Equivalents = 15000 + 27500 + 17500 = 60000

(iii) **Acid Test Ratio** = Liquid Assets/Current Liabilities = 45000/40000 = **1.125:1**

Liquid Assets = Current Assets – Inventory = 60000 – 15000 = 45000

(iv) **Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory = 50000/15000 = **3.33 times**  
Cost of Revenue from Operations = Revenue from Operations – Gross Profit = 100000 – 50000 = 50000  
Average Inventory = 15000

**Note:** Since value of inventory in the beginning and inventory at the end is not given, the amount of inventory is assumed to be average inventory.

(v) **Fixed Assets Turnover Ratio** = Revenue from Operations/Net Fixed Assets = 100000/100000 = **1:1**  
Net Fixed Assets = Land and Building + Plant and Machinery + Furniture = 50000 + 30000 + 20000 = 100000

### Question 31

From the following information calculate Gross Profit Ratio, Inventory Turnover Ratio and Trade Receivables Turnover Ratio.

	Rs
Revenue from Operations	3,00,000
Cost of Revenue from Operations	2,40,000
Inventory at the end	62,000
Gross Profit	60,000
Inventory in the beginning	58,000



<b>Trade Receivables</b>	<b>32,000</b>
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**Answer:**

(i) **Gross Profit Ratio** = (Gross Profit/Net Revenue from Operations) x 100 = (60000/300000) x 100 = **20%**

Gross Profit = Net Revenue from Operations – Cost of Revenue from Operations = 300000 – 240000 = 60000

(ii) **Inventory Turnover Ratio** = Cost of Revenue from Operations/Average Inventory = 240000/60000 = **4 times**

Average Inventory = (Inventory in the Beginning + Inventory at the end)/2 = (58000 + 62000)/2 = 120000/2 = 60000

(iii) **Trade Receivables Turnover Ratio** = Net Revenue from Operations/Average Trade Receivables = 300000/32000 = **9.4 times**

**Note:** Here, Trade Receivables are assumed as the Average Trade Receivables.